

PRODUCT DATA SHEET

Sika® Stabilizer-5010 TBM AE

Plasticising admixture with set retarding properties for use in annular grout Component A for TBM application

DESCRIPTION

Sika® Stabilizer-5010 TBM AE is a liquid plasticizer which disperses and deflocculates cement particles whilst delaying the hydration process, thereby retarding the initial and final set. It can be used to improve workability without the addition of extra water, or to allow reductions in the free water content. Due to improved dispersion of the cement particles the process of hydration of Component A proceeds under the optimum conditions, leading to improved strength characteristics with or without reduction in free water.

USES

- High flow, low cement content, high w/c ratio annular grout mixes for TBM tunneling.
- Hot weather applications of grout where control of initial and final set is important.
- Setting control of annular grout mixes for injection behind segmental tunnel linings.

FEATURES

- The retarding action allows storage of the annular grout in the pumping lines and grout agitator tanks on the TBM for up to 72 hours depending on dosage.
- Enables controlled extension of initial set of Component A.
- Highly effective in low cement content high water cement ratio mixes where its use enables grout to be made more workable without loss in strength, density and durability
- Allows a reduction in free water in the region of 5–12 %
- The strength gain of annular grouts containing Sika® Stabilizer-5010 TBM AE is enhanced. After retardation of initial and final set, a more rapid hardening of the grout occurs, and the effect on stripping time is negligible.

PRODUCT INFORMATION

Packaging	Sika® Stabilizer-5010 TBM AE is available in bulk, 1000 L flowbins or 210 L drums.
Shelf life	12 months from date of production
Storage conditions	The Product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5 °C and +50 °C. Always refer to the packaging.
Appearance and colour	Brown liquid
Specific gravity	~1.158 (+25 °C)
Total chloride ion content	Nil (EN 934-2)

APPLICATION INFORMATION

Recommended dosage	Field trials should be conducted to determine the optimum addition rates of Sika® Stabilizer-5010 TBM AE. As a guide to these trials, a dosage range of 3–5 % per m ³ of backfill grout. Dosages outside this range can be used where improved workability, increased water reduction and/or further set retardation are required.
Compatibility	Sika® Stabilizer-5010 TBM AE can be used with all types of Portland cement including sulphate resisting (Type V). For use with other special cements, contact Sika Technical Department. Sika® Stabilizer-5010 TBM AE is compatible with accelerators such as Sika® Stabilizer-6001 AE Sika® Stabilizer-5010 TBM AE should not be premixed with other admixtures. If other admixtures are to be used in annular grouts containing Sika® Stabilizer-5010 TBM AE, they must be dispensed separately. Consult Sika Technical Department.

BASIS OF PRODUCT DATA

All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

IMPORTANT CONSIDERATIONS

A severe over dosage of Sika® Stabilizer-5010 TBM AE will result in:

- Increased retardation of initial and final set.
- Increase in workability.

Providing annular grout is properly cured the ultimate strength of the grout will not be adversely affected and will generally be higher than for normal concrete. Care should be taken to allow for the effect on injection pressures and advance rates.

ECOLOGY, HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

APPLICATION

Sika® Stabilizer-5010 TBM AE is added to the Component A mix.

Never add Sika® Stabilizer-5010 TBM AE to the dry cement. No extension to normal mixing time is necessary.

LEGAL NOTES

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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ISO 9001, 14001, 45001 – SGS
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- Sika MB Construction Chemicals for Manufacturing LLC
- Master Builders Solutions LLC

All products are supplied under a management system certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9001, ISO 14001 and ISO 45001.



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